

FOUR NEW AFRICAN PARASITIC HYMENOPTERA BE-
LONGING TO THE SUBFAMILY MICROGASTERINAE.

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The following four species of parasitic Hymenoptera were received in 1916 by the Bureau of Entomology from Mr. C. C. Gowdey. All the specimens were reared, but in only two cases are the names of the host caterpillars known. Very few Microgasterinae appear to have been recorded from Africa and these will form an interesting addition to the known fauna.

Family BRACONIDAE.

Subfamily MICROGASTERINAE.

MICROGASTER FASCIIPPENNIS, new species.

Female.—Length, 2.9 mm. Black; palpi and scape reddish testaceous; flagellum fusco-testaceous basally, becoming piceous toward the apex; anterior femora, narrow apex of median femora, anterior and median tibiae and tarsi, and a broad basal annulus on the hind tibiae pale reddish testaceous; remainder of legs black or blackish; first and second ventral abdominal segments pale; apical one-fourth of the forewing distinctly clouded, the basal three-fourths hyaline, stigma and veins dark brown. Head, mesoscutum, and scutellum closely, strongly punctured, the punctures not confluent; face with a delicate median carina from the base of antenna half way to clypeus; frontal depression smooth and polished; posterior orbits more sparsely punctured than the face; mesoscutum without parapsidal furrows; mesopleura punctate above and below with a nearly impunctate area medially; propodeum rugoso-punctate, with a strong median carina, the anterior margin nearly smooth; hind coxae large, strongly punctured, subopaque, extending backward to the middle of the abdomen; hind femora sculptured like their coxae; hind tibiae slightly curved, the longer tibial spur equal to two-thirds the length

of the basal tarsal joint; second cubital cell of forewing very minute, triangular; abdomen about equal to the thorax in length, compressed from the sides, its greatest width not more than half the width of thorax at the tegulae; first tergite twice as long as broad, the apex scarcely broader than the base, the lateral apical angles slightly rounded; tergites all polished; ovipositor slightly exerted but not extending beyond the apex of abdomen, very slightly curved downward.

Male.—Agrees with the female except that the middle femora and the hind tibiae are mostly testaceous.

Type-locality.—Kampala, Uganda, British East Africa.

Type.—Cat. No. 21598, U.S.N.M.

Host.—*Deilemera apicalis* Walker.

Sixteen females and three males received by the Bureau of Entomology from Mr. C. C. Gowdey and on his authority reared from the above-named host.

The cocoons of this species are pure white and arranged side by side in a compact mass like the cells in honeycomb. The arrangement of the cocoons is similar to that of some species of *Microplitis* and the nonsculptured abdomen also suggests that genus, but the long spurs on hind tibiae and the absence of crenulate episternauli place the species in *Microgaster*.

APANTELES PALLIDOCINCTUS, new species.

Female.—Length, 2.9 mm. Black; mouthparts, scape, legs, including all coxae, venter of the abdomen and the first and second dorsal segments pale testaceous; wings hyaline, veins and stigma dark brown. Head polished with sparse weak punctures on face; antennae about as long as the body, the first six flagellar joints subequal and three times as long as thick, following joints gradually shorter. Thorax smooth, polished, the mesoscutum anteriorly and the mesopleura anteriorly and below moderately punctured, the sternauli smooth and not deeply impressed; propodeum smooth, impunctate, without a median carina; hind coxae extending backward beyond the middle of the abdomen and sparsely punctured; abdomen smooth and polished, narrow, its greatest width only a little more than half the width of thorax at tegulae; first tergite slightly narrower at apex than base and about twice as long as broad at base; second tergite with a short oblique furrow on each side of the middle extending backward and laterally from the angles of the first tergite; ovipositor not exerted beyond the apex of abdomen. Male unknown.

Type-locality.—Kampala, Uganda, British East Africa.

Type.—Cat. No. 21599, U.S.N.M.

Host.—*Papilio demodocus* Esper.

Six female specimens received by the Bureau of Entomology from Mr. C. C. Gowdey, and on his authority reared from the above-named host.

APANTELES UGANDAENSIS, new species.

Female.—Length, 2.2 mm. Black; mouthparts, scape, pedicel, three or four basal flagellar joints, tegulae, and the legs except the hind coxae pale testaceous, the apex of hind tibiae and their tarsi slightly infuscated; ventral abdominal segments one and two also testaceous; wings hyaline, stigma and costa dark brown, the other veins paler. Head smooth or nearly so, with obscure punctures on the face; face rather narrow, the greatest distance between the eyes below the antennae very slightly less than the distance from the base of antennae to clypeus; antennae shorter than the body, the first flagellar joint about two and one-half times as long as thick, second to the sixth joints each about one and one-half times as long as thick, joints beyond the sixth to the apex slightly shorter, the apical four or five joints more or less pedicellate; malar space not greater than the width of a mandible at base; thorax for the most part impunctate, the mesoscutum anteriorly and the pleura anteriorly, with some very weak punctures; propodeum polished without a median carina; hind coxae with some obscure punctures along the upper side; transverse part of discoideus distinct; abdomen about equal to the thorax in length, smooth, polished throughout, distinctly narrower than the thorax, first tergite about twice as long as broad at base, slightly broader at base than apex; second tergite with an oblique furrow each side extending from the lateral angles of the first tergite backward and toward but not reaching the lateral margins; ovipositor not extending beyond the apex of abdomen.

Male.—Unknown.

Type-locality.—Kampala, Uganda, British East Africa.

Type.—Cat. No. 21600, U.S.N.M.

Host.—A Pyralid on *Hibiscus*.

Four females received by the Bureau of Entomology from Mr. C. C. Gowdey.

APANTELES GOWDEYI, new species.

Female.—Length, 2 mm. Black; palpi and scape beneath pallid; coxae all black; anterior and median femora, tibiae, and tarsi and the posterior femora and tibiae, except apex of latter, pale testaceous; apex of hind tibiae and their tarsi brownish black; abdomen black, except ventral segments one and two, which are concolorous with the legs; wings hyaline, the costal and radial veins and stigma dark brown, other veins paler. Head smooth, with very obscure weak punctures on the face and posterior orbits; distance from the antennae to the base of clypeus not more than two-thirds the shortest

distance between the eyes below the antennae; antennae longer than the body, flagellar joints one to six subequal and nearly three times as long as thick, following joints gradually shortening toward the apex, the apical joints about twice as long as thick and not distinctly pedicellate; mesoscutum anteriorly, mesopleura along the anterior margin, and the mesosternum obscurely punctured, smooth; remainder of thorax polished impunctate or practically so; propodeum smooth, without a median carina, the longitudinal carina laterad of the spiracles rather weak; transverse abscissa of discoideus obsolete; hind coxae impunctate polished, attaining the middle of the abdomen; abdomen polished, narrow, its greatest breadth not more than half the width of thorax at tegulae, first tergite narrower at apex than base and about twice as long as broad at base, second tergite with an oblique furrow from the posterior lateral angles of the first tergite to the lateral margins; ovipositor extending very slightly beyond apex of abdomen.

Male.—Agrees with female except in the usual sexual characters.

Type-locality.—Kampala, Uganda, British East Africa.

Type.—Cat. No. 21601, U.S.N.M.

Ten specimens received by the Bureau of Entomology from Mr. C. C. Gowdey and reared according to the label from an unknown caterpillar.